

ORIGINAL

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

In re)
)
Redesignation of the 17.7-19.7 GHz Frequency)
Band, Blanket Licensing of Satellite Earth)
Stations in the 17.7-20.2 GHz and 27.5-30.0)
GHz Frequency Bands, and the Allocation of)
Additional Spectrum in the 17.3-17.8 GHz and)
24.75-25.25 GHz Frequency Bands for Broadcast)
Satellite-Service Use)

IB Docket No. 98-172

RM-9005

RM-9118

To: The Commission

**REPLY COMMENTS OF KASTAR SATELLITE COMMUNICATIONS CORP.
AND KASTARCOM. WORLD SATELLITE, LLC**

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KASTARCOM. WORLD SATELLITE, LLC**

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Summary

In these Reply Comments, KaStar Satellite Communications Corp. and KaStarcom. World Satellite, LLC (collectively, the "KaStar Companies") urge adoption of rules to enable the ubiquitous, economic and efficient deployment of fixed satellite service earth stations to provide new global services to the public.

First, the KaStar Companies advocate establishment of blanket licensing standards for both GSO FSS and NGSO FSS in the band segments where these services enjoy primary or co-primary status. It is only through blanket licensing that earth stations can be mass-produced at reasonable cost, thereby facilitating the introduction of new and competitive services. To the extent additional analysis is required to set specific standards, the KaStar Companies support the continued efforts of working groups to achieve this goal.

Second, based on their review of the comments in this proceeding, the KaStar Companies continue to endorse their plan to segment the 18 GHz band to redesignate 250 MHz at 18.3-18.55 GHz as co-primary with terrestrial FS and 250 MHz at 18.55-18.8 GHz as primary. This plan strikes the appropriate balance between FSS interests, which require sufficient spectrum for their planned services, and FS interests, which will experience lesser disruption of existing services than is proposed by other commenters.

Third, the KaStar Companies support the relocation reimbursement plan advocated by Teledesic LLC, as modified to prescribe specific time periods for the negotiation of relocation expenses. This plan will provide all parties with certainty as to the amount of financial support to be paid to relocating services, as well as the timing of any displacement.

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KaStar Satellite Communications Corp. and KaStarcom. World Satellite, LLC (collectively, the "KaStar Companies"), pursuant to Section 1.415 of the Commission's Rules, hereby submit their Reply Comments in the above-referenced proceeding.¹

Introduction

1. In its Comments, the KaStar Companies urged the Commission to adopt blanket licensing standards for Geostationary Orbit Fixed Satellite Service ("GSO FSS") earth stations in those portions of the 18 GHz and 28 GHz frequency bands where GSO FSS have primary or co-

¹ See *Redesignation of the 17.7-19.7 GHz Frequency Band, Blanket Licensing of Satellite Earth Stations in the 17.7-20.2 GHz and 27.5-30.0 GHz Frequency Bands, and the Allocation of Additional Spectrum in the 17.3-17.8 GHz and 24.75-25.25 GHz Frequency Bands for Broadcast Satellite-Service Use*, FCC 98-235 (released September 18, 1998) (the "NPRM"). On November 19, 1998, the KaStar Companies filed their Comments in this proceeding. The Commission has extended the deadline for filing Reply Comments until December 21, 1998. See *Order*, DA 98-2321 (released November 2, 1998). Thus, these Reply Comments are timely filed.

primary status, so that earth stations can be ubiquitously, efficiently and economically deployed. The KaStar Companies also presented a fair and reasonable modification of the Commission's plan to redesignate portions of the 18 GHz band for FSS downlink operations, such that FSS would be accorded primary status on 250 MHz and co-primary status on an additional 250 MHz. This plan would advance the future growth of FSS and terrestrial Fixed Service ("FS") by maximizing service opportunities, reducing the need for ongoing inter-service coordination and minimizing disruption of existing services. Nothing in the Comments filed in this proceeding change the KaStar Companies belief that their plan strikes the appropriate balance and thus would best serve the public interest.

2. In addition to the KaStar proposal, the KaStar Companies endorse the plan governing the relocation of FS proposed by Teledesic LLC ("Teledesic") in its Comments.² This proposal would use a simple process to determine relocation costs and provide financial certainty, reduce the time involved in negotiations and consequently, expedite the delivery of new FSS and FS services to the public.

Discussion

I. BLANKET LICENSING STANDARDS ARE NECESSARY FOR FSS EARTH STATIONS.

A. The Commission Should Adopt The GSO Blanket Licensing Standards In The BL-WG Report.

3. The Commission should adopt the blanket licensing standards for uplink and downlink operations for GSO FSS earth stations contained in the Report filed with the Commission by the

² See Comments of Teledesic LLC at 11-22 ("Teledesic Comments").

Blanket Licensing Working Group ("BL-WG") on November 19, 1998.³ The Report reflects the consensus of the first round GSO FSS licensees reached after more than one year of deliberations regarding appropriate blanket licensing standards. The BL-WG carefully considered the elements used to determine the coordination threshold levels, including antenna size and performance, and the power of the amplifiers.

4. In addition, the Report's proposed power threshold level for uplink operations is identical to the standard proposed by the European Telecommunications Standards Institute for Europe. The KaStar Companies and other supporters of the Report agree that a uniform threshold level will enable manufacturers to create fewer classes of earth stations, thereby facilitating high-volume manufacturing, stimulating investment and lowering costs, all to the ultimate benefit of consumers. Conversely, differing standards would require extensive coordination around the world with attendant higher equipment and administrative costs.

5. The KaStar Companies continue to endorse the Report. However, the KaStar Companies acknowledge that the BL-WG has not had the opportunity to consider several of the technical issues raised in the *NPRM*. In light of the progress that has been made and the relatively narrow gap between the various proposals, the Commission should refer this matter to the BL-WG for further consideration and a final report as soon as possible. This should provide the parties

³ In addition to KaStar, members of the BL-WG supporting the Report include Cyberstar Licensee LLC, Loral Orion, Inc., EchoStar Satellite Corporation, GE American Communications, Inc., Lockheed Martin Corporation, Motorola, Inc., Morning Star Satellite Company, L.L.C. and, to a limited degree, PanAmSat Licensee Corp. Each of these participants hold Ka-band satellite licenses granted in the first round.

with sufficient time to resolve all outstanding technical issues without unnecessarily delaying this proceeding.

B. The Commission Should Establish A Working Group To Recommend Blanket Licensing Standards For All NGSO FSS Earth Stations

6. In their Comments, the KaStar Companies also urged the Commission to adopt rapidly standards for blanket licensing of NGSO FSS earth stations.⁴ This position was supported by other commenters.⁵ As is the case with blanket licensing of GSO FSS earth stations, blanket licensing of NGSO FSS earth stations will enable service to be ubiquitously and efficiently deployed around the world. This will allow manufacturers to mass-produce earth station terminals at a substantially lower cost, reduce operating costs and increase the ability to attract financing on reasonable terms.

7. The KaStar Companies disagree with Teledesic's conclusion that the Commission should adopt system-by-system blanket licensing in lieu of a standard applicable to all NGSO FSS licensees.⁶ It is significant to note that Teledesic is the only current NGSO FSS licensee, and that @Contact, LLC and four other applicants have filed applications for new systems. Under Teledesic's proposal, future NGSO FSS operators such as @Contact could be required to adapt or compromise their systems to avoid causing harmful interference to Teledesic's system. This would create a significant barrier to entry given the ambitious constellation Teledesic plans to

⁴ See KaStar Comments at 15-16.

⁵ See Comments of Pegasus Development Corporation at 8; Comments of TRW, Inc. at 7; Comments of Lockheed Martin Corporation at 18; Comments of GE American Communications, Inc. at 11-12.

⁶ See Teledesic Comments at 9 & 10.

launch, and could greatly restrict the ability of @Contact and other perspective providers to provide service to the public and competition among NGSO FSS systems.

8. To avoid this inequity and encourage competition, the Commission should adopt uniform blanket licensing standards applicable to all NGSO FSS earth stations. This will provide Teledesic with the necessary assurances to construct and launch its NGSO FSS systems while ensuring that future NGSO FSS systems also can operate in those frequency bands. To determine the blanket-licensing standards, the KaStar Companies ask that the Commission establish a Blanket Licensing Working Group for NGSO FSS licensees and applicants similar to the BL-WG for GSO FSS. The Commission also should establish a time table in which this new Working Group would be required to provide a report to the Commission with recommendations on blanket licensing standards.

II. THE KASTAR COMPANIES' PROPOSAL FOR REDESIGNATING THE 18 GHZ BAND BEST SERVES THE PUBLIC INTEREST

9. Although there is much debate between the FSS and FS interests on how to allocate spectrum in the 18 GHz band, there is wide agreement that segmenting the band is the only practical solution. Interference and coordination issues simply cannot be overcome if the spectrum is shared by FSS and FS.

10. In general, the FS interests propose to reduce the available spectrum for FSS from 1100 MHz to only 220 MHz while proposing a reduction for FS from 2000 MHz to 1780 MHz.⁷ By contrast, the majority of GSO FSS interests are willing to accept an allocation of 500 MHz,

⁷ See Comments of the Fixed Point-to-Point Communications Section, Wireless Communications Division of the Telecommunications Industry Association at 3-4; Comments of the Fixed Wireless Communications Coalition at 4-5.

consistent with the Commission's previous decision to allocate spectrum in the 18 GHz band for GSO FSS⁸ and the authorizations for GSO FSS licensees.⁹ Further, the 500 MHz of spectrum in the 18 GHz band for downlink operations, combined with the 500 MHz from 19.7-20.2 GHz, matches the 1000 MHz designated for uplink operations. Moreover, as stated in the KaStar Companies' Comments, GSO FSS needs to operate in contiguous spectrum of at least 125 MHz in order to operate in a spectrally efficient manner.¹⁰

11. In their Comments, the KaStar Companies proposed an allocation plan that provides both FSS and FS with sufficient, usable spectrum without the need for excessive displacement of existing FS operations. The KaStar Companies agree with the Commission and other GSO FSS commenters that the Commission should allocate 500 MHz of spectrum in the 18.3-18.8 GHz band

⁸ The Report and Order in the 28 GHz rule making proceeding authorized GSO FSS to operate with at least 500 MHz of spectrum in the 18 GHz band. *See Rulemaking to Amend Parts 1, 2, 21, and 25 of the Commission's Rules to Redesignate the 27.5 - 29.5 GHz Frequency Band, to Reallocate the 29.5 - 30.0 GHz Frequency Band, to Establish Rules and Policies for Local Multipoint Distribution Service and for Fixed Satellite Services First Report and Order and Fourth Notice of Proposed Rule Making*, 11 FCC Rcd 19005, 19036-37 (1996) ("28 GHz First Report and Order").

⁹ *See KaStar Satellite Communications Corp.*, 13 FCC Rcd 1366 (Int. Bur. 1997); *EchoStar Satellite Corporation*, 13 FCC Rcd 5664 (Int. Bur. 1997); *VisionStar, Inc.*, 13 FCC Rcd 1428 (Int. Bur. 1997); *Orion Atlantic, L.P.*, 13 FCC Rcd 1416 (Int. Bur. 1997); *PanAmSat Licensee Corp.*, 13 FCC Rcd 1405 (Int. Bur. 1997); *NetSat 28 Company, L.L.C.*, 13 FCC Rcd 1392 (Int. Bur. 1997); *Loral Space & Communications Ltd.*, 13 FCC Rcd 1379 (Int. Bur. 1997); *Hughes Communications Galaxy, Inc.*, 13 FCC Rcd 1351 (Int. Bur. 1997); *Orion Network Systems, Inc.*, 12 FCC Rcd 23027 (Int. Bur. 1997); *Lockheed Martin Corporation*, 12 FCC Rcd 23014 (Int. Bur. 1997); *Comm, Inc.*, 12 FCC Rcd 23001 (Int. Bur. 1997); *GE American Communications, Inc.*, 12 FCC Rcd 6475 (Int. Bur. 1997); and *Morning Star Satellite Company, L.L.C.*, 12 FCC Rcd 6039 (Int. Bur. 1997).

¹⁰ *See KaStar Comments at 11.*

to GSO FSS.¹¹ However, as an accommodation to FS and in an effort to reduce the relocation burdens, the KaStar Companies proposed that the 18.3-18.55 GHz segment be allocated to GSO FSS on a co-primary basis and the 18.55-18.8 GHz segment be allocated to GSO FSS on a primary basis. This plan would require CARS, which occupies the 18.55-18.58 GHz segment, and the Fixed Service Point-to-Point, which occupies the 18.6-18.82 GHz segment, to be displaced.¹² In addition, it would be necessary to modify the power limitations for the Earth Exploration Satellite and Space Research occupying the 18.6-18.8 GHz band. These changes would enable blanket licensing of GSO FSS earth stations from 18.3-18.8 GHz.

12. Redesignating the 18.55-18.8 GHz frequency segment for GSO FSS on a primary basis will permit development of FSS, but will not harm FS. FS can not use the 18.58-18.8 GHz segment for future growth because the Commission proposes to redesignate the paired band from 18.92-19.16 GHz to secondary status. Likewise, redesignating the 18.3-18.55 GHz frequency segment for GSO FSS and FS use on a co-primary basis protects both services. The existing FS can continue operating in this segment, and FSS would be required to protect existing facilities. Where CARS operations cover urban areas, it is less likely that FSS will prevent future development of CARS stations, leaving FSS to deploy earth stations principally in rural areas.

¹¹ See, e.g., Comments of Lockheed Martin at 2; Comments of Hughes Electronics, Inc. at 4; Comments of PanAmSat Corporation at 2.

¹² CARS spectrum overlaps with this plan in the 30 MHz between 18.55 - 18.58 GHz. As explained in the KaStar Companies Comments, the full amount of CARS spectrum can be maintained either in the 18.112-18.55 GHz band (much of which is co-primary with GSO FSS) or, as suggested by other commenters, to the 13 GHz band. If CARS is relocated to the 13 GHz band, then the 18.3-18.55 GHz segment should, along with the 18.55-18.8 GHz segment, be allocated to GSO FSS on a primary basis. The KaStar Companies proposed relocating Fixed Service Point-to-Point to the 17.8-18.3 GHz band segment.

These stations should not be expressly limited to large gateway stations, so that there would be some opportunity for FSS and CARS coordination.

13. This proposal is preferable to the plan proposed by the Commission. In the *NPRM*, CARS stations would have secondary status and could not continue to develop service in this band with ubiquitously deployed GSO FSS earth stations. Under the KaStar Companies' proposal, CARS stations can continue to expand service.

14. This proposal reflects the KaStar Companies' efforts to strike an appropriate balance between FSS and FS interests. Unlike other GSO FSS licensees that proposed 500 MHz of spectrum for primary GSO FSS and massive displacement, the KaStar Companies propose that only 250 MHz be so allocated.¹³ And, unlike FS operators that proposed to limit GSO FSS to as little as 220 MHz of primary spectrum, the KaStar Companies have demonstrated that 95 MHz would be unusable in light of the need for uplinks and downlinks to operate in contiguous blocks of 125 MHz.

III. TELEDESIC'S PROPOSAL FOR DETERMINING RELOCATION COSTS FOR FS IS A FAIR AND EQUITABLE APPROACH.

15. In the *NPRM*, the Commission requested comments on the conditions under which relocation might be necessary for existing 18 GHz services, as well as the procedures for implementing such relocation.¹⁴ Although several parties filed comments on this issue,¹⁵ only

¹³ See, e.g., Comments of Lockheed Martin at 2; Comments of Hughes Electronics, Inc. at 4; Comments of PanAmSat Corporation at 2.

¹⁴ See *NPRM* at ¶41.

¹⁵ See, e.g., Comments of Cellular Telecommunications Association at 6; Comments of BellSouth Corporation at 8; Comments of Fixed Point-Point Communications Sections, Wireless

Teledesic provided a detailed proposal that balances the interests of the migrating service and the new service, equitably determines the relocation costs, minimizes the necessity for negotiation, reduces the likelihood of litigation and expedites the provision of new service. As discussed below, the KaStar Companies support Teledesic's proposal, as modified to prescribe specific time periods to finalize relocation agreements.

16. Building upon the experience in the 4 GHz proceeding, Teledesic proposes a logical method for determining when and how much FSS licensees should be required to pay FS licensees for relocation costs.¹⁶ Applying a phased approach, incumbent FS licensees would have an absolute right to operate in the 18 GHz band until January 1, 2001 and could be relocated only on a voluntary, case-by-case basis. From January 1, 2001 until January 1, 2004, incumbents would be subject to mandatory relocation at the option and expense of an FSS provider. Thereafter, all remaining grandfathered FS stations would become secondary and no longer entitled to compensation.¹⁷ Teledesic proposes that compensation to incumbent licensees should be based upon the unamortized costs of the replaced equipment, plus two percent of these "hard costs" to cover engineering and installation costs.¹⁸

Communications Division of the Telecommunications Industry Association at 14.

¹⁶ See Teledesic Comments at 14-15. For a discussion of the difficulties in negotiating relocation costs see generally *Amendment to the Commission's Rules Regarding a Plan for Sharing the Costs of Microwave Relocation Second Report and Order*, 12 FCC Rcd 2705 (1997); *Redevelopment of Spectrum to Encourage Innovation in the Use of New Telecommunications Technologies, Second Memorandum Opinion and Order*, 9 FCC Rcd 7797 (1994).

¹⁷ See Teledesic Comments at 14.

¹⁸ See *id.* at 16.

17. The Teledesic proposal ensures that FS licensees are fairly compensated for relocation costs but do not receive a windfall, and should significantly simplify negotiations concerning relocation. The unamortized costs of the equipment are readily ascertainable and represents its remaining value as determined by the FS licensee. The FSS provider should not be required to provide the FS licensee with equipment where, by the FS licensee's own calculations, it would have to purchase new equipment when it has completely amortized its costs. The two percent add-on represents a fair value for the costs associated with the relocation.

18. The Commission should require only those FSS providers requesting relocation of an FS licensee to be responsible for paying the FS licensee's relocation expenses. FSS providers propose to provide a wide variety of services at various power levels, even with blanket licensing. It is possible that some FSS providers may object to receiving interference from a grandfathered FS licensee while other FSS providers may not. It is inequitable to require those FSS providers willing to accept interference to contribute to the relocation costs if they are willing to accept interference.¹⁹ However, where a new FSS operator would have otherwise received harmful interference but enjoys the benefits of prior relocation after incumbent FSS providers have paid relocation costs, the new FSS licensee should be required to reimburse the FSS providers for its *pro rata* share of the relocation costs.

19. The January 1, 2004 sunset date provides for an orderly transition to the newly redesignated 18 GHz band. FSS providers intend to provide ubiquitous service in rural and urban areas within the next several years, and thus require a reasonable time period in which they can

¹⁹ Limiting the number of FSS providers involved in a relocation costs negotiations should have the added benefit of expediting the matter.

begin providing service to the public. Similarly, the sunset provision should satisfy FS licensees because it provides them with a reasonable transition time to migrate to the new spectrum while continuing to provide service.²⁰

20. To expedite this negotiation process and the provision of service to the public, the KaStar Companies propose that the Commission adopt a timetable for the parties to reach an agreement. The FS licensee should be required to provide evidence of its unamortized costs within 60 days of receiving a written request from an FSS provider to relocate the FS licensee. The FSS provider then would have 60 days from receipt of the FS licensee's documentation of its unamortized costs to agree or raise objections. The parties would have a further 60 days to reach a written agreement or submit the matter to the Commission for a binding and final ruling. If either party fails to timely respond, it will be deemed to have waived its rights.

21. The Teledesic proposal, as modified above, will reduce the potential for litigation over relocation costs. In present situations involving relocation costs where the parties are unable to reach agreement, one or both parties submits the matter to the Commission for consideration. After the completion of the pleading cycle, the matter may remain pending before the Commission for several years.²¹ This process does not serve the public interest because it delays new service,

²⁰ The sunset provisions are consistent with the Commission's procedures for reaccommodation of FS to provide spectrum for Direct Broadcast Satellites. *See Establishment of a Spectrum Utilization Policy for the Fixed and Mobile Services' Use of Certain Bands Between 947 MHz and 40 GHz*, 54 RR 2d 1001, 1008 (1983).

²¹ *See Peter Wayne Lechman*, 11 FCC Rcd 4104 (1996) (dispute over relocation costs for radio station lasted over five years).

consumes the Commission's scarce resources, and increases the costs for both parties by adding additional unrecoverable costs in the form of legal fees.

Conclusion

The Commission should adopt blanket licensing standards for FSS on an expedited basis enabling FSS to efficiently provide ubiquitous new services to the public. Also, the Commission should adopt the KaStar Companies' proposal for redesignating the 18 GHz band between FSS and FS as an equitable approach that allocates sufficient spectrum to FSS without unduly disrupting existing service. Finally, with the refinements proposed by the KaStar Companies, the Commission should adopt Teledesic's proposal for determining relocation costs as a fair and equitable procedure that provides much needed certainty to this process.

Respectfully submitted,

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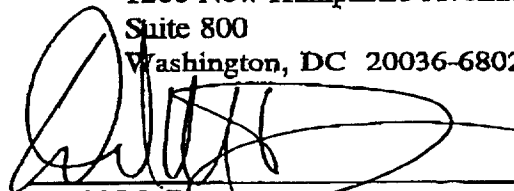
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